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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,237	02/22/2002	Toru Tanimori	MAD-C200	9202

7590 09/25/2003
Lorusso & Loud
3137 Mount Vernon Avenue
Alexandria, VA 22305

EXAMINER

HANNAHER, CONSTANTINE

ART UNIT PAPER NUMBER

2878

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,237

Applicant(s)

TANIMORI ET AL.

Examiner

Constantine Hannaher

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION**Information Disclosure Statement**

1. The references cited in the Search Report for PCT/JP00/05165 have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO-1449 form, must be filed within the set period for reply to this Office action.

Oath/Declaration

2. When applicant states that the post office address is the "same" as residence applicant's representative should keep in mind that a "residence" is a city and state or foreign country. The superfluous information given for residence is accepted as constituting a mailing address. The Office has been able to discern the city and state or foreign country of residence from the information supplied. See the requirements of 37 CFR 1.63(c)(1) as amended effective November 7, 2000.

Drawings

3. Fig. 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said,"

should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract is too long. The length of the abstract is a requirement of PCT Rule 8.1(b).

5. Because acceptable units generally have internationally recognized symbols and names, it is not permissible to use abbreviations for their unit symbols or names, such as sec (for either s or second), sq. mm (for either mm² or square millimeter), cc (for either cm³ or cubic centimeter), mins (for either min or minutes), hrs (for either h or hours), lit (for either L or liter), amps (for either A or amperes), AMU (for either u or unified atomic mass unit), or mps (for either m/s or meter per second).

Note the use of "sec" in the first paragraph of page 1. The use of the metric system is a requirement of PCT Rule 10.1(a).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemonnier *et al.* (US005742061A) and Comby *et al.* (US004280075A).

With respect to independent claim 1, Lemonnier *et al.* discloses a detector (Fig. 1A) suitable for particle beam (column 1, line 12) imaging (column 4, lines 27-29) employing gas amplification (column 1, lines 17-18) attained by pixel-type electrodes comprising anode strips 6 formed on the back surface of a double-sided substrate 7 and strip shaped cathode electrodes 5 each having an aperture 8. The detector of Lemonnier *et al.* does not comprise columnar anode electrodes, but Comby *et al.* discloses (Fig. 2) that columnar anode electrodes 3 planted such that their upper ends penetrate the double-sided substrate 6 so as to be exposed to a surface thereof within cathode electrodes 2 are useful in radiation detectors for establishing stable multiplication (column 3, lines 43-46). In view of the stable multiplication afforded by the columnar anode electrodes suggested by Comby *et al.*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the detector of Lemonnier *et al.* to comprise columnar anode electrodes planted on the anode strips 6 (as the anodes 3 of Comby *et al.* are planted on the means 18) such that their upper ends penetrated the double-sided substrate 7 so as to be exposed to a surface thereof. The radius of the aperture 8 is similar to the thickness of the substrate 7 (the range at column 4, line 51 encompasses the recited value). The diameter of the aperture 8 is smaller than the width of the anode strip 6 (Fig. 2A).

With respect to dependent claim 2, the detector suggested by Lemonnier *et al.* and Comby *et al.* does not specify a width for the anode strips 6. In view of the suggested multiplication cell separation of 300 μm (column 7, line 64) it is considered that the illustrations suggest a width for the anode strips 6 which is within the recited range.

With respect to dependent claim 3, the detector suggested by Lemonnier *et al.* and Comby *et al.* does not specify an interval for the anode strips 6. In view of the suggested multiplication cell separation of 300 μm (column 7, line 64) it is considered that the illustrations suggest an interval for the anode strips 6 which is within the recited range. The apertures 8 in the strip-shaped cathode electrodes are “at intervals of a predetermined distance” (*i.e.*, the apertures are not created randomly). The detector suggested by Lemonnier *et al.* and Comby *et al.* does not specify a diameter for the apertures 8. In view of the suggested multiplication cell separation of 300 μm (column 7, line 64) it is considered that the illustrations suggest a diameter for the apertures 8 which is within the recited range. Comby *et al.* describes the suggested columnar anode electrodes 3 as “threadlike” (column 3, line 27) but does not specify a diameter or height. Lemonnier *et al.* suggests a height of several dozen micrometers (column 7, line 25) which is considered to touch or overlap the recited range for height. In view of the suggestion of Lemonnier *et al.* regarding the ratio at column 4, line 51 it is considered that an anode electrode 3 as suggested by Comby *et al.*, to fit in the aperture suggested by Lemonnier *et al.* would have a diameter which would touch or overlap the recited range.

Response to Submission(s)

9. This application has been published as WO02/01249 on January 3, 2002 and as US2002/0134945A1 on September 26, 2002.

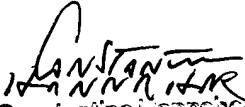
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ch


Constantine Hamacher
Primary Examiner